

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-17 (canceled)

18. (Currently amended) ~~A An lithography apparatus for polarizing UV light comprising:~~

(a) a source producing a light beam having at least one wavelength within the UV spectrum;

(b) a mask;

(~~b~~) (~~c~~) a substrate transparent to light in the UV spectrum and disposed in a path of the light beam; and

(~~e~~) (~~d~~) an array of wire elements on the substrate;

wherein the array of elements are radially arranged in a circular pattern around the optical axis of the polarizer and divided into groups of parallel elements to polarize incident UV light and output a tangentially polarized outgoing light, with respect to the cylindrical symmetry of the polarizer, toward the mask.

19. (Currently amended) The apparatus of claim 18, wherein the elements in said group have a period pitch of about one quarter the wavelength of the beam of UV light.

20. (Currently amended) The apparatus of claim 18, wherein the elements in said group have a period pitch between about 0.1λ and 0.5 2λ, where λ is the wavelength of the beam.

21. (Original) The apparatus of claim 18, wherein the elements have a thickness of between about 0.04 and 0.3 μm.

22. (Currently amended) The apparatus of claim 18, wherein the substrate includes fused silica, calcium fluoride, or sapphire, quartz, or magnesium fluoride.

23. (Currently amended) The apparatus of claim 18, wherein the UV light comprises at least two polarizations and wherein the elements generally reflect most incident light of a first polarization direction and transmit most of the light of a second polarization direction.

24. (Canceled)

25. (Canceled)

26. (Currently amended) An A lithographic apparatus for providing an exposure beam along an optical path comprising:

- (a) a wire grid polarizer; and
- (b) an illuminator having a pupil; and
- (c) a mask;

wherein the polarizer comprises a substrate that is transparent to ultraviolet (UV) light and an array of elements patterned on the substrate that polarize UV light and produce a pattern of polarization in the UV light at the pupil of the illuminator radially polarized light.

27. (Canceled)

28. (New) The apparatus of claim 20, wherein the elements of said group have a pitch between about 0.1λ and 0.5λ , where λ is the wavelength of the beam.

29. (New) The apparatus of claim 20, wherein the elements of said group have a pitch of about one quarter of a wavelength of the UV light.

30. (New) The apparatus of claim 20, wherein the elements of said group have a pitch of between about 45 nm and 95 nm.

31. (New) The apparatus of claim 18, wherein the elements include aluminum, silver or gold.

32. (New) The apparatus of claim 18, wherein the incident UV light is substantially unpolarized.